

Infectious diseases of Australian horses

A basic guide to prevention and vaccination.



zoetis



Long Acting
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**Vaccination recommendations
for tetanus:^{2,3}**

Tetanus vaccines:

Equivac[®] T or Equivac[®] 2in1

Primary course:

2 doses 4 weeks apart from 3 months
of age or older

All adult horses:

Annual boosters

Pregnant mares:

Booster 1 month prior to foaling

Infectious diseases can kill: why take the risk?

When it comes to avoiding deadly and devastating diseases in our horses, being well informed and proactive goes a long way. Here's what you need to know about some common infections that could affect your horse.

Tetanus

Tetanus is an often-fatal bacterial disease that causes distressing clinical signs. A bacterial toxin attacks the horse's central nervous system, causing muscles of the body to spasm uncontrollably. In most cases, unless treated early, the horse will have convulsions and respiratory failure, followed by death.¹

The risk of tetanus is widespread because the organism that causes it, *Clostridium tetani*, lives in soil and manure and enters the body through wounds. Although tetanus is not passed from horse to horse directly, horses are particularly at risk because of their environment and their tendency to injure themselves.¹

Vaccination is the most effective way of avoiding Tetanus. A cost-effective vaccine choice is Equivac 2in1, which not only vaccinates against tetanus but also against strangles.

Ensure your mares are well-vaccinated before having a foal: Colostrum from a vaccinated mare will be rich in antibodies that offer temporary protection to the foal.²

As well as Equivac 2in1, there are several other products available against tetanus, depending on your horse's circumstances. For instance, Equivac TAT is used for immediate short-term protection and treatment, and Equivac T vaccine can be used for long-term immunisation. Your horse can receive both immediate and long-lasting protection with simultaneous injections of both Equivac TAT and Equivac T.²

! FAST FACT:

Up to 80% of horses that get tetanus will die or have to be euthanised.¹

As tetanus is found in the environment, it is recommended that all horses be vaccinated against this disease every year.³

Strangles

Strangles is a respiratory disease of horses caused by the bacterium *Streptococcus equi subspecies equi*. Although most horses recover from clinical signs such as “snotty” nasal discharge, fever and labored breathing (due to enlarged lymph nodes), strangles is highly debilitating and may be fatal: your horse may suffer for days or months, and because it’s so contagious, horses have to be isolated for at least 6 weeks.^{4,5}

Due to the highly infectious nature of strangles, any horse that travels to compete, or mixes with other horses should be vaccinated twice per year.³

! FAST FACT:

Some horses can show no outward signs of strangles, yet they can still carry the infection and spread it to other horses.⁵

Strangles can rapidly spread either via horse to horse contact, or indirectly via contaminated water and feed containers, stalls, pastures, people or tack.⁴

Another problem is that the strangles bacterium can survive in the environment for weeks or possibly months, providing an ongoing risk.⁴

Good hygiene can minimise the risk of spread between horses and of course, vaccination is recommended to help protect your horse against this potentially devastating infection.⁵

Equine herpes virus

Equine herpes virus (EHV) is found in horse populations worldwide. There are many different strains of the virus, including EHV-1 and EHV-4. EHV-1 can cause respiratory diseases, especially in young horses, neurological diseases, and abortion. EHV-4 causes respiratory disease and may cause abortion in some mares.⁷

The risk of abortion means that all pregnant mares and horses in contact with pregnant mares should be vaccinated against EHV.⁸

EHV can be spread by the following:⁹

- Aerosols, fluids or foetal matter from aborted mares
- Young horses with ‘colds’
- Clinically healthy carrier horses
- Pasture, feed bins, water troughs, halters, rugs, bedding, floats and staff clothing that have been in contact with affected horses

Over an infected horse’s lifetime, the virus can reactivate and cause a recurrence of clinical signs as well be a source of infection for new outbreaks.⁹

If your horse has been diagnosed with herpes virus, ensure it is isolated for about 28 days, or as long as your vet recommends.⁷

Again, good hygiene practices can minimise the risk of equine herpes virus affecting your horse, and vaccination is recommended.^{7,8}

! FAST FACT:

A horse can transmit the herpes virus to other horses, even after it has recovered from its own illness.⁷





Vaccination recommendations for strangles and EHV:^{3,6}

Strangles vaccines: Equivac[®]

2in1 or Equivac[®] S

EHV vaccine: Duvaxyn[®] EHV1,4

Primary courses:

Strangles: 3 doses at least 2 weeks apart commencing 3 months of age or older

EHV: 2 doses 4 weeks apart commencing 3-5 months of age or older

Adult horses:

Strangles: Boosters every 6 months

EHV: Boosters every 6 months

Pregnant mares:

Strangles: Boosters every 6 months including a booster 4 weeks prior to foaling

EHV: Boosters at 5,7 and 9 months of gestation

Hendra virus

Hendra virus causes a potentially fatal disease. Infection can spread from horse to other horses, humans and dogs. Hendra virus has only been reported in Australia, with infected horses only seen in NSW and QLD to date.^{10,11,12}

Fruit bats are the natural hosts of the Hendra virus and the virus is most likely transmitted from fruit bat to horse via the ingestion of bat urine. Hendra virus has an incubation period of up to 16 days and is spread via contact with respiratory secretions or other bodily fluids from an infected horse.¹²

Hendra virus infection has been fatal in >80% of horses and 57% of humans.¹⁰

There is no treatment for Hendra virus infection in horses or humans, however humans suspected of being exposed may be offered a preventative monoclonal antibody therapy at the discretion of health authorities.¹²

The difficulty with the disease, is that the clinical signs are very non specific. A recent review of Hendra cases revealed that the most frequently reported clinical signs are lethargy or depression, temperature, ataxia (unsteady gait) and loss of appetite. This means that Hendra is not easily diagnosed, as the clinical signs appear similar to many other more common equine illnesses.¹⁰ The only way to diagnose Hendra infection is to perform an exclusion test, the results of which may take up to 5 days to come back, depending on location.¹³

The human, economic, and insurance risks of Hendra infection has meant that many equine vet hospitals in Northern NSW and in QLD have strict policies where they will not admit a sick unvaccinated horse until a negative exclusion test is provided. Sadly, this means that horses may die while waiting for the result.¹³

It is therefore recommended that owners of any horse within a Hendra endemic area, or any horse travelling to a Hendra endemic area (NSW and QLD) have a plan in relation to the virus. Such plans should consider the following:

- Which veterinarian they will utilise for an unwell horse?
- Any policy this vet may have in relation to the virus
- Will the horse potentially need to be referred to a different hospital, and the policies of the referral hospital?
- Will the horse survive the wait for exclusion result?
- What are the implications for insurance if the horse dies while waiting for treatment?
- What are the implications if human exposure also occurs?

The above questions should be considered prior to travelling any horse for breeding, sale, racing, training, spelling or competition, as different geographic locations and different businesses will have different policies.

A register of Hendra vaccinations is kept, in order that vets, owners, event organisers and other interested parties can easily assess the vaccination status of the horse.¹²

FAST FACT:

A Vaccination against Hendra virus is available (Equivac HeV). The vaccine helps protect horses and indirectly helps protect humans, often allowing prompt treatment of sick horses by veterinary professionals, both in field and in hospital¹⁵



HENDRA. WHAT'S YOUR PLAN?

Vaccination recommendations for Hendra virus:¹⁴

Hendra virus vaccine: Equivac® HeV

Primary course:

2 doses 3-6 weeks apart commencing at 4 months* of age or older followed by a booster 6 months later.

All horses**:

Boosters annually

***Foals:** Born to vaccinated mares should commence at 6 months of age or older

****Pregnant mares:** Should not be vaccinated in the first 45 days or the last 2 weeks of gestation.

STOP DEADLY INFECTIONS BEFORE THEY START

Vaccination recommendations for rotavirus and salmonella.^{17,18}

Rotavirus vaccine: Duvaxyn R

Salmonella vaccine: Equivac EST

Primary courses:

Duvaxyn R: dose during pregnancy at 8, 9, and 10 months of gestation

Equivac EST: 2 doses a month apart from 4 months of age. a 3rd dose 6 months later if vaccination commences under 12 months of age.

Adult horses:

Equivac EST: Annual boosters*

Pregnant mares:

Duvaxyn R: Booster at 10 months of gestation

Equivac EST: Booster 6 weeks before foaling

*Equivac EST is contraindicated for stallions and horses in training.





! FAST FACT:

Salmonella can be transferred to humans, so people handling sick horses should be careful to apply strict biosecurity practices.

Salmonella

Salmonella is a bacterium that can cause severe diarrhoea in foals and adult horses.¹⁵

The most obvious sign of infection is debilitating diarrhoea, which can lead to dehydration. For young foals, salmonella can be deadly as it can cause septicemia, a bacterial blood infection that can spread to multiple organs throughout the body.¹⁵

Salmonella may be contracted from environmental sources, and is easily spread between horses, either via horse to horse contact or via people or contaminated equipment.¹⁵

Rotavirus

Rotavirus is a major cause of foal diarrhoea. Young foals are highly susceptible to infection with rotavirus and develop a watery diarrhoea which can lead to severe dehydration and occasionally death.¹⁶

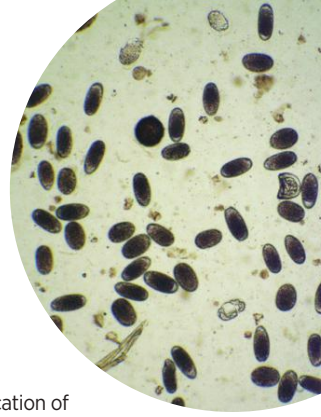
Vaccination of pregnant mares has been shown to decrease the incidence and severity of foal diarrhoea cases on farms.¹⁶

Implementation of a rotavirus vaccination program makes an important contribution to effectively managing diarrhoea in foals.¹⁶

Strict biosecurity and good management and handling practices can reduce the incidence of foal gastrointestinal upsets, and any mare owner considering breeding should implement both a vaccination and management protocol with the assistance of their veterinarian or stud farm.¹⁶

It is recommended that any mare moving into a high risk situation (high numbers of horses, transient horse populations) should be vaccinated to provide optimal protection to the foal during its first months of life.¹⁶

Strategic Worming – more than just treatment



MANAGE

How you can effectively manage parasites

Breaking the lifecycle of the parasites reduces the amount of worm challenge horses face. Essential to this is reducing the number of worms on the pasture where horses graze, keeping the reinfection challenge to a minimum.

In turn, managing the pasture can also reduce reliance on wormers, reducing progression to resistance.

Principles of pasture management

Remove faeces from pasture

- Removing faeces twice weekly from pasture takes worms out of circulation and lowers the risk of re-ingestion

Graze the pasture with cattle or sheep

- Most worms are 'host-specific' – they don't survive in other species
- Cross grazing with sheep and cattle where possible can reduce pasture burden

Rest the pasture

- Rest the pasture for at least three months, preferably when really cold or really hot and dry
- Sunlight and hard frost will help to break the cycle by killing eggs and larvae

Don't over-stock paddocks

- Over-stocking forces horses to graze closer to where they defaecate, increasing the chance of re-ingesting parasites

TEST

Faecal egg count (FEC)

A Faecal Egg Count gives an indication of adult parasites in your horse by measuring the number of worm eggs in a dung sample. This test can detect the presence of egg laying adult stages of small and large strongyles, as well as ascarids. FECs are normally reported as eggs per gram (epg)

What is this test useful for?

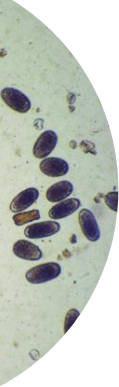
- ✓ To indicate the presence of an adult parasite burden in your horse
- ✓ To tailor worming treatments by targeting horses with higher eggs counts (>200 epg)
- ✓ To check that a worming program is working. A test can be made before and after treatment. If the egg count is not significantly reduced, it may indicate resistance to the type of wormer used

PLAN

Creating a deworming plan

Effective parasite management involves the creation of individual deworming plans tailored to your particular needs. This has many benefits, including:

- Potentially slowing the development of resistance
- Less time and resources spent on chemical deworming
- Allows development of customised health care plans for each horse on the property



Plans can include:

- ✓ **When to worm horses** – which active to use – how often to worm
- ✓ **Which horses NOT to worm**
- ✓ **When to run FECs** and on which horses



The importance of strategic worming

- ✓ Strategic worming tells us which horses to worm and when. Veterinarians suggest the following:
- ✓ Worm horses with higher egg counts more often than horses with low egg counts
- ✓ Do not aim to eradicate all worms
- ✓ Worm as infrequently as possible, but use the most effective wormer when you do
- ✓ Use Moxidectin to kill encysted small strongyles in autumn and spring
- ✓ Worm young horses as necessary with the actives that work against their particular burden (for example, ascarids)
- ✓ Perform FECs on each horse at least once a year
- ✓ Ensure you measure the correct weight of your horse in order to dose correctly
- ✓ Quarantine new arrivals and perform a FEC before treatment with your usual wormer and 14 days after treatment to ensure the wormer is effective in that horse

WHY YOU CAN COUNT ON EQUEST® PLUS TAPE¹⁹

Equest Plus Tape protects against a broad range of worm species, with particular potency against small strongyles, the most important parasites in the modern adult horse.

Effective

- ✓ Only wormer to kill “hidden” (encysted) strongyles in a single dose
- ✓ Effective against worms known to cause colic

Longer-lasting protection

- ✓ Only wormer to provide up to 16 weeks protection
- ✓ Less labour intensive. Fewer treatments required.
- ✓ Cost effective

Easy to use

- ✓ Gel formulation liquefies on tongue. Low volume, narrow barrel syringe
- ✓ Easy administration

Safe

- ✓ Can be used in pregnant mares and foals from 4 weeks
- ✓ A reassuring worming solution

1. NSW DPI primefact 495 Horse Health Vaccination against tetanus and strangles June 2007. 2. American Association Equine Practitioners Vaccination Guidelines for tetanus 2012. 3. Pfizer Animal Health Equine Infectious Diseases Advisory Board Vaccination Guidelines 2012. 4. <https://thehorse.com/125253/strangles-management-and-prevention/> 5. Boyle et al. ACVIM Consensus Statement Streptococcus equi Infections in Horses: Guidelines for Treatment, Control, and Prevention of Strangles; *Journal of Veterinary Internal Medicine* 2018. 6. American Association Equine Practitioners Vaccination Guidelines for strangles 2012. 7. American Association Equine Practitioners Infectious Disease Guidelines: Equine herpes virus 1 and 4 and related diseases 2017. 8. American Association Equine Practitioners Vaccination Guidelines for Equine herpesvirus rhinopneumonitis 2012. 9. <https://hunter.lis.nsw.gov.au/resource-hub/media-releases/equine-herpes-virus-alert-for-hunter-horse-owners>. 10. Zoetis Technical Brief: Hendra Virus: The Diversity of Clinical Signs June 2018. 11. Middleton et al. Experimental Hendra virus infection of dogs: virus replication, shedding and potential for transmission, *Australian Veterinary Journal*, 95;1-2:10-18. 12. <https://www.vetvoice.com.au/ec/diseases/hendra-virus/>. 13. R. L'Estrange pers comm. 14. Equivac HeV product label. 15. American Association Equine Practitioners Infectious Disease Guidelines: Salmonellosis Revised 2017. 16. American Association Equine Practitioners Infectious Disease Guidelines: Rotavirus 2019. 17. Duvaxyn R product label. 18. Equivac EST product label 19. Equest Plus Tape product label.

Speak to your Veterinarian or Equine Retailer today about Equivac, Duvaxyn and Equest.

Zoetis considers the contents of this document to be best practice based on the science available to it as at June 2019 and includes advice from expert guidelines panels. It is a guide only and you should consult your veterinarian for context-specific advice.

For more information about your horse's health and well-being, get involved with Health4Horses.

www.health4horses.com.au



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